IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	Atty. Docket
BERNARDUS H.W. HENDRIKS ET AL.	GB 040078
	Confirmation No. 7688
Serial No. 10/599,369	Group Art Unit: 2873
Filed: September 27, 2006	Examiner: COLLINS, D.J.

Title: CONTROLLABLE OPTICAL LENS

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United States Patent and Trademark Office
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APPEAL BRIEF

Sir:

Appellants herewith respectfully present a Brief on Appeal as follows, having filed a Notice of Appeal on October 23, 2008:

REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of record Koninklijke Philips Electronics N.V., a corporation of The Netherlands having an office and a place of business at Groenewoudseweg 1, Eindhoven, Netherlands 5621 BA.

RELATED APPEALS AND INTERFERENCES

Appellants and the undersigned attorney are not aware of any other appeals or interferences which will directly affect or be directly affected by or having a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1-13 are pending in this application. Claims 1-13 are rejected in the Final Office Action mailed in July 18, 2008. This rejection was upheld, in the Advisory Action that was mailed on October 8, 2008. Claims 1-13 are the subject of this appeal.

STATUS OF AMENDMENTS

Appellants filed on September 18, 2008 an after final amendment in response to a Final Office Action mailed July 18, 2008. The after final amendment did not include any amendments. In an Advisory Action mailed on October 8, 2008, it is indicated that the after final amendment filed on September 18, 2008 does not place the application in condition for allowance. This Appeal Brief is in response to the Final Office Action mailed July 18, 2008, that finally rejected claims 1-13, which remain finally rejected in the Advisory Action mailed on October 8, 2008.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention, for example, as recited in independent claim 1, is directed to a controllable optical lens system shown in FIG 6 and described from page 9, lines 13-21, comprising a chamber housing a first fluid 10 and a second fluid 12 (shown in FIG 1), where the interface between the two fluids 10, 12 defines a lens surface 15 (shown in FIG 1). As shown in FIG 6, an electrode arrangement for electrically controlling the shape of the lens surface 15 is provided where the electrode arrangement comprises a first electrode 14 and a second electrode 16.

As shown in FIG 6 and described from page 9, lines 13-21, the controllable optical lens system further includes a power source 60 for supplying current to the electrode arrangement; current monitoring means 64, such as a current meter for monitoring the current supplied by the power source over time and deriving the charge supplied; voltage monitoring means 66, such as a voltage meter for monitoring the voltage on one of the electrodes 14, 16 of the electrode arrangement; and processing means 62, such as a

processor for deriving from a desired lens power a value for controlling the total charge to be supplied to the electrode arrangement 14, 16.

The present invention, for example, as recited in independent claim 9, is directed to a method of driving a controllable optical lens shown in FIG 3 and described on page 8, lines 1-11. As shown in FIGs 1 and 6, and described from page 9, lines 13-21, the lens comprises a chamber housing first and second fluids 10, 12, where the interface between the fluids 10, 12defines a lens surface 15. The optical lens also includes an electrode arrangement for electrically controlling the shape of the lens surface, where the electrode arrangement comprises first and second electrodes 14, 16.

As shown in FIG 3 and described on page 8, lines 1-11, the method comprises selecting 30 a desired lens power; deriving 32 from the desired lens power a value for controlling the total charge to be supplied to the electrode arrangement; supplying current 34 to the electrode arrangement; monitoring the current supplied 36 over time and deriving the charge supplied, and monitoring the voltage on one of the electrodes of the electrode

arrangement; and supplying current until the total charge supplied to the electrode arrangement reaches the derived value.

In one embodiment of the present invention, for example, as recited in dependent claim 2, the processing means 62, such as the processor derive a ratio of the charge supplied to the voltage, as described on page 7, line1 to page 9, line 9, including equations 3 and 5.

In one embodiment of the present invention, for example, as recited in dependent claim 5, the processing means 62, such as the processor includes a look-up table, where the look-up table receives as input an effective electrode height, which depends on the lens power, and provides as output the ratio of the charge supplied to the voltage, as described on page 7, lines 14-19, and page 8, line 27 to page 9, line 21.

In one embodiment of the present invention, for example, as recited in dependent claim 10, the deriving operation includes deriving a ratio of the charge supplied to the voltage, as described on page 7, line1 to page 9, line 9, including equations 3 and 5.

In one embodiment of the present invention, for example, as recited in dependent claim 13, the processing means 62, such as the processor includes a look-up table, deriving a value indicating the total charge, where the look-up table receives as input an effective electrode height, which depends on the lens power, and provides as output the ratio of the charge supplied to the voltage, as described on page 7, lines 14-19, and page 8, line 27 to page 9, line 21.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-13 of U.S. Patent Application Serial No. 10/599,369 are unpatentable over U.S. Patent No. 6,806,988 (Onuki).

ARGUMENT

Claims 1-13 are said to be unpatentable over Onuki.

Appellants respectfully request the Board to address the patentability of independent claims 1 and 9, as well as address the patentability of dependent claims 2, 5, 10 and 13, and further claims 3-4, 6-8 and 11-12 as depending from independent claims 1 and 9, based on the requirements of independent claims 1 and 9. This position is provided for the specific and stated purpose of simplifying the current issues on appeal. However, Appellants herein specifically reserve the right to argue and address the patentability of claims 3-4, 6-8 and 11-12 at a later date should the separately patentable subject matter of claims 3-4, 6-8 and 11-12 later become an issue. Accordingly, this limitation of the subject matter presented for appeal herein, specifically limited to discussions of the patentability of independent claims 1 and 9 is not intended as a waiver of Appellants' right to argue the patentability of the further claims and claim elements at that

later time.

The Final Office Action correctly notes on page 3 that Onuki fails to explicitly teach any of the following features of independent claim 1, which are similarly included in independent claim 9, namely (illustrative emphasis provided):

> means for monitoring the **current** supplied by the power source over time and deriving the charge supplied;
> means (66) for monitoring the voltage on one (16) of the electrodes of the electrode arrangement; and
> means (62) for deriving from a desired lens power a value for **controlling the total charge** to be supplied to the electrode arrangement (14,16).

It is alleged that Onuki discloses (in FIG 9) control feedback loops of parameters such as a current and a voltage, and thus the above noted features of claims 1 and 9 are therefore obvious.

It is respectfully submitted that, assuming arguendo that FIG 9 does show any feedback, which does not appear to be the case, any such feedback or control is merely related to controlling **voltage** levels. In particular, column 8, lines 53-56 specifically recite:

> output **voltage** of the electric power supply 132 will be applied to the optical element 101 by the DC/DC converter 133, the amplifier 134 and the amplifier 135 with a desired **voltage** value, frequency

and duty. (Emphasis added)

That is, at best, Onuki discloses and suggests to only monitor the **voltage** waveform provided to the optical element, namely, the "desired **voltage** value, frequency and duty" cycle. There are various ways to control an optical lens, where Onuki discloses one such way or method of control, namely by controlling the voltage value, frequency and duty cycle of a voltage waveform applied to electrodes of the optical element.

Such a disclosure in no way suggests monitoring, both the voltage on one of the electrodes, and monitoring the **current** supplied by the power source over time and **deriving the charge** supplied and deriving, from a desired lens power, a value for controlling the total charge to be supplied to the electrode, as recited in independent claims 1 and 9.

Accordingly, it is respectfully submitted that independent claims 1 and 9 are allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 2-8 and 10-13 should also be allowed at least based on their dependence from independent claims 1 and 9, as well as their

individually patentable elements.

Dependent claims 2, 5, 10 and 13 also include patentable subject matter. In particular, column 8, lines 63-67 of Onuki merely discloses that a rectangular **voltage** waveform, as shown in FIG 8D, is applied between transparent electrode 103 and a sticklike electrode 125. This is no way discloses or suggest deriving a **ratio** of the charge supplied to the voltage, as recited in claims 2 and 10. Further, providing an effective electrode height as input into a look-up-table, and providing as output the ratio of the charge supplied to the voltage, as recited in claims 5 and 13, are nowhere disclosed or suggested in Onuki. FIG 10 of Onuki merely discloses a look-up table for reading out a desired duty ratio (S123-S124) for the output voltage from the power supply.

In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellants reserve the right to

submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 1-13 are patentable over Onuki.

Thus, the Examiner's rejections of claims 1-13 should be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

1.(Original) A controllable optical lens system, comprising:

a chamber housing first and second fluids (10,12), the interface between the fluids defining a lens surface (15);

an electrode arrangement (14,16) for electrically controlling the shape of the lens surface (15), the electrode arrangement comprising first (14) and second (16) electrodes; and

a power source (60) for supplying current to the electrode arrangement;

means for monitoring the current supplied by the power source over time and deriving the charge supplied;

means (66) for monitoring the voltage on one (16) of the electrodes of the electrode arrangement; and

means (62) for deriving from a desired lens power a value for controlling the total charge to be supplied to the electrode arrangement (14,16).

2.(Original) A system as claimed in claim 1, wherein the means for deriving a value is for deriving a ratio of the charge supplied to the voltage.

3.(Original) A system as claimed in claim 2, wherein the power source is also for maintaining a constant voltage (V.sub.1), and is controlled to maintain the voltage on the one (16) of the electrodes after the derived ratio between the charge supplied and the voltage has been reached.

4.(Previously Presented) A system as claimed in claim 1, wherein the means for deriving comprises a look-up table (LUT).

5.(Original) A system as claimed in claim 4, wherein the look-up table receives as input an effective electrode height, which depends on the lens power, and provides as output the ratio of the charge supplied to the voltage.

6.(Previously Presented) A system as claimed in claim 1,

wherein the electrode arrangement comprises:

a drive electrode arrangement comprising a base electrode (14) and a side wall electrode (16).

7.(Original) A system as claimed in claim 6, wherein the side wall electrode (16) comprises an annular electrode which surrounds the chamber.

8.(Previously Presented) A system as claimed in claim 1, wherein the first fluid (10) comprises a polar and/or conductive liquid and the second fluid (12) comprises a nonconductive liquid.

9.(Original) A method of driving a controllable optical lens, the lens comprising a chamber housing first and second fluids (10,12), the interface between the fluids defining a lens surface (15) and an electrode arrangement for electrically controlling the shape of the lens surface, the electrode arrangement comprising first and second electrodes (14,16), wherein the method comprises:

selecting (30) a desired lens power;

deriving (32) from the desired lens power a value for controlling the total charge to be supplied to the electrode arrangement;

supplying current (34) to the electrode arrangement; monitoring the current supplied (36) over time and deriving the charge supplied, and monitoring the voltage on one of the electrodes of the electrode arrangement; and

supplying current until the total charge supplied to the electrode arrangement reaches the derived value.

10.(Original) A method as claimed in claim 9, wherein deriving a value (32) comprises deriving a ratio of the charge supplied to the voltage.

11.(Original) A method as claimed in claim 10, further comprising maintaining a constant voltage (40) on the one of the electrodes of the electrode arrangement after the derived ratio between the charge supplied and the voltage has been reached.

12.(Previously Presented) A method as claimed in claim 9, wherein the deriving a value indicating the total charge to be supplied comprises accessing a look-up table.

13.(Original) A method as claimed in claim 12, wherein an effective electrode height is input into the look-up-table, which depends on the lens power, and the ratio of the charge supplied to the voltage is output from the look-up table.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None